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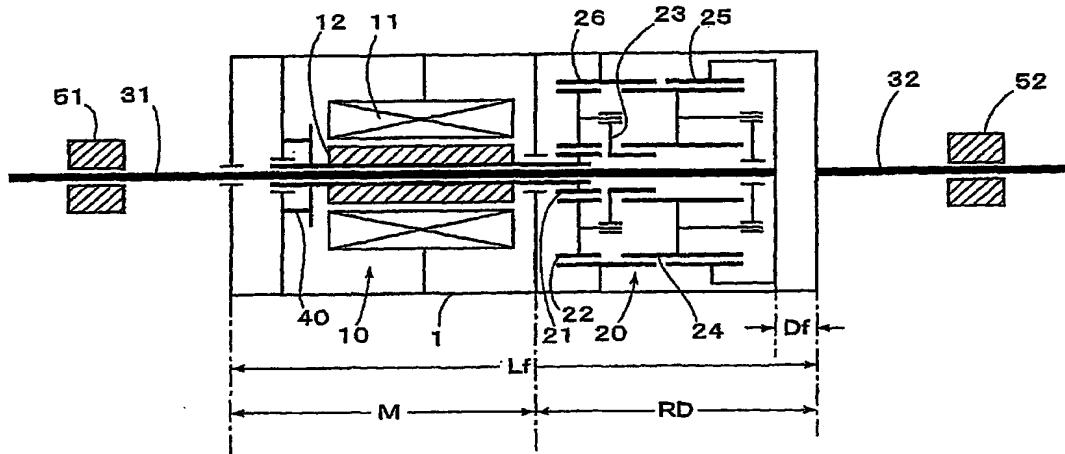
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(54) Title: STABILIZER CONTROL DEVICE FOR VEHICLE



(57) Abstract: A stabilizer control device for vehicle includes a pair of stabilizer bars (31, 32) provided between a left wheel and a right wheel of a vehicle, and an actuator including a reduction mechanism (RD) connecting between said pair of stabilizer bars (31, 32) and a motor (M) connected to the reduction mechanism (RD) for providing torsion force to said pair of stabilizer bars (31, 32) through the reduction mechanism (RD) wherein the reduction mechanism (RD) comprises a first gear (25) and a second gear (26) for generating relative rotational speeds differential therebetween, the first gear (25) and the second gear (26) are coaxially placed adjacent to each other, and opposed side faces of stabilizer bars (31, 32) are adjacently connected with the first gear (25) and the second gear (26) respectively and disposed in the reduction mechanism (RD).

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A. CLASSIFICATION OF SUBJECT MATTER
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 198 50 169 C (HEYNAU ANTRIEBSTECHNIK GMBH) 27 July 2000 (2000-07-27) figures 1,2	1-4, 9, 10
A	-----	5, 6, 8
Y	PATENT ABSTRACTS OF JAPAN vol. 0154, no. 37 (M-1176), 7 November 1991 (1991-11-07) & JP 3 182832 A (MAZDA MOTOR CORP), 8 August 1991 (1991-08-08) abstract; figures 5-8	1-4, 9, 10
Y	WO 99/67100 A (BOSCH GMBH ROBERT ; SCHUELKE ARMIN (DE); STOLLER ROLAND (DE); VERHAGEN) 29 December 1999 (1999-12-29) page 9, line 29 – page 10, line 11 abstract; figure 2	1-4, 9, 10
A	-----	5, 6
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Patent family members are listed in annex.

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PCT/IB2004/000912

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/68390 A (PNP LUFTFEDERSYSTEME GMBH ; REICHEL KLAUS (DE); BEETZ STEFAN (DE); KLA) 20 September 2001 (2001-09-20) abstract; figures -----	1,4
A	US 4 660 669 A (SHIMIZU YASUO) 28 April 1987 (1987-04-28) abstract; figure 1 -----	1,4

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/000912

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
DE 19850169	C	27-07-2000	DE	19850169 C1		27-07-2000
JP 3182832	A	08-08-1991	JP	2803870 B2		24-09-1998
WO 9967100	A	29-12-1999	DE	19846275 A1		30-12-1999
			WO	9967100 A1		29-12-1999
			EP	1030790 A1		30-08-2000
			JP	2002518245 T		25-06-2002
			US	6425585 B1		30-07-2002
WO 0168390	A	20-09-2001	DE	10012915 A1		04-10-2001
			WO	0168390 A1		20-09-2001
			EP	1263617 A1		11-12-2002
			US	2003137090 A1		24-07-2003
US 4660669	A	28-04-1987	JP	61030462 A		12-02-1986
			DE	3525912 A1		30-01-1986
			FR	2567837 A1		24-01-1986
			GB	2161770 A ,B		22-01-1986